

IN THE CLAIMS

Sus D1 1 1. (Amended) A method for encoding input data comprising the
2 steps of:
3 applying an overlapped reversible wavelet transform to the input data
4 using non-minimal length reversible filters to produce a series of coefficients
5 [generating transformed signals in response to the input data, wherein the
6 transformed signals are generated using a reversible wavelet transform;] and
7 compressing the series of coefficients [transformed signals] into data
8 representing a losslessly compressed version of the input data.

1 Please cancel Claims 2 and 3 ~~without prejudice~~.

Sus D1 1 4. (Amended) The method defined in Claim 1 [3] wherein said [at
2 least one] non-minimal length reversible filters comprise[s] a plurality of one-
3 dimensional filters.

Sus D2 1 6. (Amended) The method defined in Claim 1 wherein the step of
2 compressing comprises embedded coding the series of coefficients
3 < [transformed signals], including the steps of ordering the series of coefficients
4 and performing bit significance embedding on the series of coefficients after
5 ordering [transformed signals].

Sus D3 1 8. (Amended) A method for decoding data into original data
2 comprising the steps of:
3 decompressing a losslessly compressed version of input data into a
4 plurality of transformed signals; and

5 generating a reconstructed version of original data from the plurality of
6 transformed signals with [using] an overlapped inverse reversible wavelet
7 transform using non-minimal length reversible filters to produce a series of
8 coefficients.

1 Please cancel Claims 9 and 10 without prejudice.

1 11. (Amended) ~~The method defined in Claim 10 wherein said [at~~
2 ~~least one] non-minimal length reversible filters comprise[s] a plurality of one-~~
3 ~~dimensional filters.~~

12. (Amended) A method for processing [encoding] input data
1 comprising the steps of:
2 generating a first plurality of transformed signals in response to the
3 input data[, wherein the transformed signals are generated using] with a
4 reversible overlapped wavelet transform using a first pair of non-minimal
5 length reversible filters;
6 compressing the first plurality of transformed signals into data
7 representing a losslessly compressed version of the input data;
8 decompressing the losslessly compressed version of the input data into
9 a second plurality of transformed signals; and
10 generating the input data from the second plurality of transformed
11 signals into a reconstructed version of the input data with [using] an inverse
12 reversible overlapped wavelet transform using a second pair of non-minimal
13 length reversible filters.

1 13. (Amended) A method for encoding input data comprising the
2 steps of:
3 transform coding the input data into a series of coefficients with an
4 overlapped reversible wavelet transform using a pair of non-minimal length
5 reversible filters; and
6 embedded coding the series of coefficients, including the steps of
7 ordering the series of coefficients and performing bit significance embedding
8 on the series of coefficients, wherein a first type of embedded coding is
9 performed on a first portion of the data and a second type of embedded coding
10 is performed on a second portion of the data.

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1 Please delete Claim 14 without prejudice.

55 DS 1 17. (Amended) A method for encoding input data comprising the
2 steps of:
3 transforming input data into a series of coefficients with an [using]
4 overlapped reversible wavelet[s] transform using a pair of non-minimal
5 length reversible filters;
6 converting the series of coefficients into sign-magnitude format [into a
7 series of formatted coefficients];
8 coding a first portion of the series of formatted coefficients using a first
9 type of embedded coding to produce a first bit stream; and
10 coding a second portion of the series of formatted coefficients using a
11 second type of embedded coding to produce a second bit stream, wherein the
12 first bit stream and second bit stream are combined into a single bit stream.

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18. (Amended) The method defined in Claim 17 [15] further

2 comprising entropy coding the single bit stream.

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1 20. (Amended) The method defined in Claim 17 wherein the first
2 portion comprises the high order bits of the series of formatted coefficients
3 and the second portion comprises the lower order bits of the series of
4 formatted coefficients.

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Please add the following claims.

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1 22. (New) An encoder for encoding input data into a compressed
2 data stream, said entropy coder comprising:
3 a reversible wavelet filter for transforming the input into a plurality of
4 coefficients using a pair of non-minimal length reversible filters;
5 an embedded coder coupled to a reversible wavelet filter for
6 performing embedded coding on the plurality of coefficients to generate a bit
7 stream; and
8 an entropy coder coupled to the embedded coder to perform entropy
9 coding on the bit stream to create coded data.

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23 (New) An encoder for encoding input data comprising:
2 a transform coder coupled to receive the input data and generate a
3 series of coefficients that represent a decomposition of the input data using a
4 pair of non-minimal length reversible filters; and
5 an embedded coder coupled to receive the series of coefficients and
6 perform bit-significance encoding on the series of coefficients to create coded